



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/544,245

08/02/2005

Vincent Douglas

348-087

2635

1009

7590

06/02/2008

KING & SCHICKLI, PLLC
247 NORTH BROADWAY
LEXINGTON, KY 40507

EXAMINER

MAY, ROBERT J

ART UNIT

PAPER NUMBER

2885

MAIL DATE

DELIVERY MODE

06/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/544,245	Applicant(s) DOUGLAS, VINCENT	
	Examiner ROBERT MAY	Art Unit 2885	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-11,13,18,19,23,25,26,28-31,34,36,37 and 39-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-11,13,18,19,23,25,26,28-31,34,36,37 and 39-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In view of the Request for Review filed on December 18, 2007, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Jong-Suk (James) Lee/

Supervisory Patent Examiner, Art Unit 2885.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 7-8, 10-11, 18-19, 25, 28, 30-31, 34, 36-37, 47-48 and 55-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (5,931,764) in view of Nashimura (4,083,177).

Regarding Claims 1 and 37 Freeman discloses in Figure 1, a display apparatus comprising a flexible display member 12 (Col 2, lines 21-22), comprising a flexible electronic pixel array (LCD using a filter having an array of pixels 86 Figured 10, Col 5, lines 65+), and a control unit 14,18,39 (power source 14, integrated circuit Col 3, lines 59-60, and buttons 18) capable for controlling the electronic pixel array provided at one end of the display member 12, and the display member 12 is in the form of a strip of a size suitable to be positioned around a limb of a user (watches or other wearable devices Col 1, lines 4-5).

Regarding Claims 7, Freeman fails to disclose the display member removably attached to the control unit wherein the display member can be detached from the control unit and replaced with an alternative design or size display member to suit the user.

Nishimura discloses in Figures 2-3, a display apparatus having a display member (liquid crystal cell 9), which can be detached to a control unit 3 for repairing the watch or replacing the liquid crystal cell instead of replacing the more expensive circuitry or controller components (Col 3, lines 50-69 and Col 4, lines 1-12 and Col 12, lines 40-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display apparatus of Freeman with an easily

removable display as taught by Nishimura so that the display can be replaced without disposing of the more expensive circuitry or controlling components.

Regarding Claims 5 and 25 Freeman discloses light emitting polymers on the display (display can comprise light emitting polymer displays Col 3, lines 55-57), but fails to disclose the display member as being bonded to a strip.

It would have been obvious to one of ordinary skill in the art to bond the light emitting polymer to the strip using an adhesive because the known technique of adhesive bonding was recognized as part of the ordinary capabilities of one skilled in the art. See *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (2007).

Regarding Claims 8 and 28, Freeman discloses in Figure 1, controls (buttons 18) are provided on the control unit 14, 18 and 39.

Regarding Claims 10, 18 and 30 Freeman discloses in Figure 6, the use of a timing circuit and the display member 12 is adapted to display time indicia to function as a watch (Col 5, lines 15-20).

Regarding Claims 11, 19 and 31, Freeman discloses in Figures 6 and 10, a means for generating visual patterns on the display member 12 (numerical patterns and color patterns, Col 5, lines 65+, and graphical images Col 4, lines 12-15) and functions as an electronic bracelet (fits around a person's wrist, Col 2, lines 21-31).

Regarding Claims 34 and 36, Freeman discloses a display apparatus with a sound sensor (piezoelectric microphone Col 2, lines 39-47).

Regarding Claims 47 and 48, Freeman fails to disclose the display member comprising a battery separate from the control unit.

It would have been obvious to one of ordinary skill to separate the battery from the controller so as to configure the display apparatus to have the battery accessible and easily replaceable. Furthermore, regarding the controller of Freeman not having a battery separate from the controller, the applicant is advised that it has been held by the courts that the mere fact that a given structure is integral does not preclude its consisting of various elements, and that constructing a formerly integral structure in various portions involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 178.

Regarding Claims 55-56, Freeman discloses a radio frequency link capable of remotely controlling a device (communication element 16 to process RF communication such as cellular messaging with computers and smart card readers Col 2, lines 48-55).

Claims 3, 6, 13, 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (5,931,764) in view of Nashimura (4,083,177) as applied to claims 1, 25 and 37 above, and further in view of Kuroda (4,060,185).

Regarding Claims 3 and 23, Freeman fails to disclose the display member sufficiently stiff so as to retain its shape without the need for a latch or other retainer.

Kuroda discloses I Figures 1 and 4, a strip which is suitable to be positioned around the limb of a user that is sufficiently stiff as to retain its shape without the need for a latch or other retainer so that the display member can be easily put on or removed as well as enhance the aesthetics of the wrist band member.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display member of Freeman with the sufficiently stiff material as taught by Kuroda so that the display member can be easily put on or removed as well as enhance the aesthetics of the wrist band member.

Regarding Claim 13, Freeman discloses light emitting polymers on the display (display can comprise light emitting polymer displays Col 3, lines 55-57), but fails to disclose the display member as being bonded to a strip.

It would have been obvious to one of ordinary skill in the art to bond the light emitting polymer to the strip using an adhesive because the known technique of adhesive bonding was recognized as part of the ordinary capabilities of one skilled in the art. See *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (2007).

Regarding Claim 6 and 26, Freeman discloses the display member as comprising a filter layer (Col 5, lines 65-67), and discloses in Figures 2A and 2B, a flexible wearable illuminating device comprising an anti-moisture covering 26, (Col 3, lines 1-10). Freeman fails to disclose the display member having a rubber backing, and a thin strip of metal forming the malleable strip.

Kuroda discloses in Figure 1, a rubber backing 6 (Col 3, line 67-68) to prevent the human body from being hurt from the ends of the metal plate (Col 4, lines 23-26) and a stainless steel material used as the malleable thing metal strip because it maintains its luster semi-permanently (Col 2, lines 10-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to back the metal plate of Freeman with the rubber

backing and stainless steel metal strip of Kuroda so that the human body is not hurt from the ends of the metal plate and the metal band maintains its luster semi-permanently.

Claims 9 and 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (5,931,764) and Nishimura as applied to Claims 8 and 28 above and further in view of Blotky (WO 00/59327).

Freeman fails to disclose the controls in the form of touch sensitive areas.

Blotky discloses a controller on a bracelet display comprising touch screens or buttons (pg 6, line12) so that the wearer can program the microprocessor (pg 5, lines 1-2) and so that the controller has a sleeker modern look and feel.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display member of Freeman with the touch sensitive areas of Blotky so the wearer can program the microprocessor and so that the controller has a sleeker modern look and feel.

Claims 39, 41, 49-50, 57-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (5,931,764) in view of Broderick (GB 2373990).

Regarding Claims 39 and 41, Freeman discloses in Figure 1, a display apparatus comprising a flexible display member 12 (Col 2, lines 21-22), comprising a flexible electronic pixel array (LCD using a filter having an array of pixels 86 Figure 10, Col 5, lines 65+), and a control unit 14,18,39 (power source 14, integrated circuit Col 3, lines

59-60, and buttons 18) provided at one end of the display member 12, and the display member 12 is in the form of a strip of a size suitable to be positioned around a limb of a user (watches or other wearable devices Col 1, lines 4-5).

Freeman fails to disclose the malleable display member as a strip of thin metal or plastic which is initially axially straight and transversely concave.

Broderick discloses in Figure 4 an armband that is made from thin plastic (Pg 3, lines 1-2) so as prevent moisture penetration and is axially straight and transversely curved (pg 2 lines 4-6) so that the arm band has a self coiling nature causing the armband to grip the arm of the wearer (Pg 4, second paragraph) without using any clasps.

Therefore, it would have been obvious to one of ordinary skill at the time the invention was made to modify the display member of Freeman with thin strips that are transversely concave so that the armband prevents moisture penetration and has a self-coiling nature without the use of clasps.

Regarding Claims 49-50, Freeman fails to disclose the display member comprising a battery separate from the control unit.

It would have been obvious to one of ordinary skill to separate the battery from the controller so as to configure the display apparatus to have the battery accessible and easily replaceable. Furthermore, regarding the controller of Freeman not having a battery separate from the controller, the applicant is advised that it has been held by the courts that the mere fact that a given structure is integral does not preclude its consisting of various elements, and that constructing a formerly integral structure in

various portions involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 178.

Regarding Claims 57-58, Freeman discloses a radio frequency link capable of remotely controlling a device (communication element 16 to process RF communication such as cellular messaging with computers and smart card readers Col 2, lines 48-55).

Regarding Claims 59-60, Freeman discloses a display apparatus with a sound sensor (piezoelectric microphone Col 2, lines 39-47).

Claims 40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (5,931,764) and Broderick (GB 2373990) as applied to claim 39 and 41 above, and further in view of Nishimura (4,083,177)

Freeman fails to disclose the display member removably attached to the control unit wherein the display member can be detached from the control unit and replaced with an alternative design or size display member to suit the user.

Nishimura discloses in Figures 2-3, a display apparatus having a display member (liquid crystal cell 9), which can be detached to a control unit 3 for repairing the watch or replacing the liquid crystal cell instead of replacing the more expensive circuitry or controller components (Col 3, lines 50-69 and Col 4, lines 1-12 and Col 12, lines 40-47).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display apparatus of Freeman with an easily removable display as taught by Nishimura so that the display can be replaced without disposing of the more expensive circuitry or controlling components.

Claims 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (5,931,764) in view of Nashimura (4,083,177) as applied to claims 1 and 37 above, and further in view of Samson (GB 2258134).

Freeman fails to disclose the pixel array provided on one side of the display member and a display provided on the opposite side of the display member. This is seen to be merely a double sided display member absent any further description or limitations in the claim.

Samson discloses in Figures 1A-1C a bracelet with display member 2B that is reversible wherein each side has a different design or color so a person would not be required to have a selection, to complement their attire, of different watches or straps which would be expensive (Pg 1, second paragraph). Furthermore the duplication of parts (i.e. the pixel array on both sides of the display member) has no patentable significance unless a new and unexpected result is produced *In re Harza*, 274 F.2d 669, 124 USPQ 378.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the pixel array or display on both sides of the display member as taught by Samson so a person would not have to have a selection of different watches or straps in order to complement their attire.

Claims 45-46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (5,931,764) and Broderick (GB 2373990) as applied to claims 39 and 41 above, and further in view of Samson (GB 2258134).

Freeman fails to disclose the pixel array provided on one side of the display member and a display provided on the opposite side of the display member. This is seen to be merely a double sided display member absent any further description or limitations in the claim.

Samson discloses in Figures 1A-1C a bracelet with display member 2B that is reversible wherein each side has a different design or color so a person would not be required to have a selection, to complement their attire, of different watches or straps which would be expensive (Pg 1, second paragraph). Furthermore the duplication of parts (i.e. the pixel array on both sides of the display member) has no patentable significance unless a new and unexpected result is produced *In re Harza*, 274 F.2d 669, 124 USPQ 378.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the pixel array or display on both sides of the display member as taught by Samson so a person would not have to have a selection of different watches or straps in order to complement their attire.

Claims 51-52 and 61-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (5,931,764) and Nashimura (4,083,177) as applied to claims 1 and 37 above, and further in view of Michael (6,433,483).

Regarding Claims 51-52, Freeman fails to disclose a light sensor for controlling the illumination of the pixel array in accordance with ambient light.

Michael discloses a light sensor for controlling the illumination of an article worn on a wrist for varying the illuminating effect (Col 5, lines 1-10) and it would have been seen that have been known that this would be useful in conserving power by controlling the level of illumination in response to ambient light.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a light sensor as taught by Michael to vary the illuminating effect in response to ambient light and to conserve power.

Regarding Claims 61-62, Freeman fails to disclose a battery recharged by a solar cell or thermoelectric cell.

Michael discloses a battery of a piece of jewelry charged by a solar cell for purposes of recharging the batteries when a conventional main power supply is not available or incompatible with the device when the wearer is traveling (Col 20, lines 60-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the battery of Freeman with a battery charged by a solar cell as taught by Michael for purposes of recharging the batteries when a conventional main power supply is not available or incompatible with the device when the wearer is traveling.

Claims 53-54 and 63-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (5,931,764) and Broderick (GB 2373990) as applied to claims 39 and 41 above, and further in view of Michael (6,433,483).

Regarding Claims 53-54, Freeman fails to disclose a light sensor for controlling the illumination of the pixel array in accordance with ambient light.

Michael discloses a light sensor for controlling the illumination of an article worn on a wrist (i.e., a bracelet) for varying the illuminating effect (Col 5, lines 1-10) and it would have been seen that have been known that this would be useful in conserving power by controlling the level of illumination in response to ambient light.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a light sensor as taught by Michael to vary the illuminating effect in response to ambient light and to conserve power.

Regarding Claims 63-64, Freeman fails to disclose a battery recharged by a solar cell or thermoelectric cell.

Michael discloses a battery of a piece of jewelry charged by a solar cell for purposes of recharging the batteries when a conventional main power supply is not available or incompatible with the device when the wearer is traveling (Col 20, lines 60-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the battery of Freeman with a battery charged by a solar cell as taught by Michael for purposes of recharging the batteries when a

conventional main power supply is not available or incompatible with the device when the wearer is traveling.

Response to Arguments

Applicant's arguments with respect to claims 1 and 37 and their progeny have been considered but are moot in view of the new ground(s) of rejection.

Regarding Claims 39 and 41, the applicant argues that the arm band of Broderick is intended to be a durable and inexpensive disposable item and is for use under low light conditions where the device of Freeman is intended to display time and other information that would not be visible in low light conditions. The Examiner does not see how this is relevant because Broderick is used to merely show that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a band made of a strip of thin metal or plastic which is initially straight and transversely concave irregardless of how inexpensive or it's intended use for attaching the band to a limb of a wearer without the use of clasps.

Applicant's arguments with respect to claims 40 and 42 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nguyen (5,102,023) and Cunningham (4,178,879) discloses

Art Unit: 2885

display apparatuses with removable displays which can be replaced with an alternate display to suit the user.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT MAY whose telephone number is (571)272-5919. The examiner can normally be reached on Mondays through Fridays 9am-12pm & 1-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jong-Suk (James) Lee can be reached on (571) 272-7044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 2885

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RM
5/29/08

/Jong-Suk (James) Lee/
Supervisory Patent Examiner, Art Unit 2885